B&B ELECTRONICS

Model 485SD9TB

Port-Powered RS-485 Converter

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The 485SD9TB is a port-powered two-channel RS-232 to RS-485 converter. It converts the TD and RD RS-232 lines to balanced half-duplex RS-485 signals. The unit is powered from the RS-232 data and handshake lines whether the lines are high or low. An external power supply can be connected to two terminals on the RS-485 connector if no handshake lines are available. The 485SD9TB has a DB-9 female connector on the RS-232 side and a terminal block connector on the RS-485 side.

RS-232 Side:

Connector:	DB-9 Female.
Signals:	Passes through pins 3 (TD) and 2 (RD). Pins 7 (RTS) and 8 (CTS) are tied together. Pins 4 (DTR), 6 (DSR), and 1 (CD) are tied together.

RS-485 Side:

Connector:	Terminal Block
Signals:	Half-duplex two-wire operation only. Automatic control circuit enables driver only when transmitting. Receiver is disabled when transmitting to prevent echo back to RS-232 device. Can transmit up to 4000 feet at 115.2k baud.

Power Requirements

No external power required if two RS-232 output handshake lines are available.

External 12VDC can be applied to pins on the RS-485 side between terminals +12VDC and GND if handshake lines are not available.

35mA current draw maximum under normal operation when externally powered.

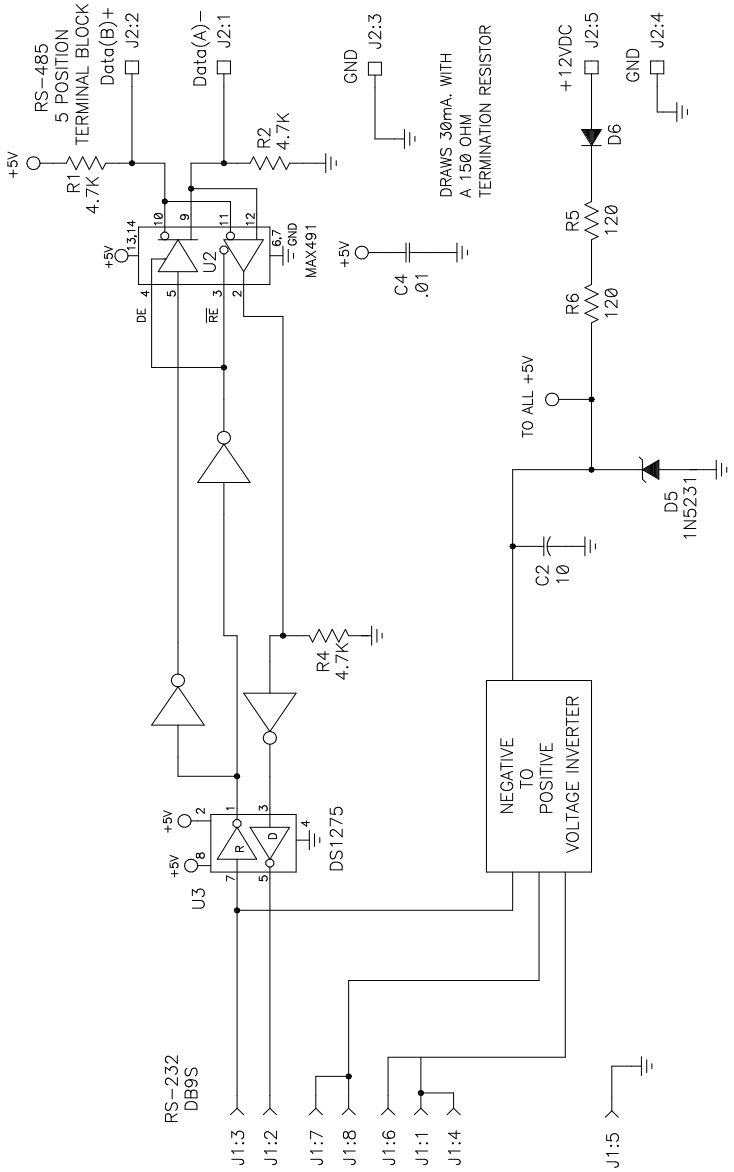
NOTE: When using an external supply, the supply should be connected only to specifically labeled power inputs (power jack, terminal block, etc.). Connecting an external power supply to the handshake lines may damage the unit. Contact technical support for more information on connecting an external power supply to the handshake lines.

Dimensions: 3.50 x 1.34 x .67 in (8.9 x 3.4 x 1.7 cm)

Although the 485SD9TB uses handshake lines to power the converter, no handshaking is required to control the RS-485 driver. The RS-485 driver is automatically enabled during each spacing state on the RS-232 side. During the marking or idle state, the RS-485 driver is disabled and the data lines are held in the marking state by the 4.7K ohm pull-up and pull-down resistors. The value of these resistors may need to be changed to a different value when termination is used in order to maintain the proper DC bias during the idle state. See B&B Electronics' RS-422/RS-485 Application Note for more information on termination and DC biasing of an RS-485 network.

The 485SD9TB has an internal connection to prevent data transmitted from the RS-232 port from being echoed back to the RS-232 port. The 485SD9TB is used as a two wire (half duplex) RS-485 converter.

PRODUCT INFORMATION



DECLARATION OF CONFORMITY

Manufacturer's Name:	B&B Electronics Manufacturing Company
Manufacturer's Address:	P.O. Box 1040 707 Dayton Road Ottawa, IL 61350 USA
Model Number:	485SD9TB
Description:	Port-Powered RS-485 Converter
Type:	Light industrial ITE equipment
Application of Council Directive:	89/336/EEC
Standards:	EN 55022 EN 61000-6-1 EN 61000 (-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11)

Robert M. Paratore, Director of Engineering

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